Midportion Achilles Tendinopathy: Clinical Practice Guidelines Revision 2018

Component 1: Medical Screening

- Appropriate for physical therapy evaluation and intervention
- Not appropriate for physical therapy evaluation and intervention

Component 2: Classify Condition

- Classify condition through differential evaluation of clinical findings suggestive of musculoskeletal impairments of body functioning (ICF) and the associated tissue pathology/disease (ICD)

Component 3: Determination of Irritability Stage

- Diagnosis of tissue irritability is important for guiding the clinical decisions regarding treatment frequency, intensity, duration, and type, with the goal of matching the optimal dosage of treatment to the status of the tissue being treated. There are cases where the alignment of irritability and duration of symptoms does not match, requiring clinicians to make judgments when applying time-based research results on a patient-by-patient basis. Stage of irritability should classify the patient’s condition as being acute or nonacute, using the diagnostic indicators outlined in component 5.

Patient Examination

- Diagnosis of midportion Achilles tendinopathy
  - Gradual onset of pain
  - Pain 2 to 6 cm proximal to Achilles insertion
  - Pain with tendon palpation
  - Positive arc sign

Differential diagnosis

- Consider other foot or ankle conditions in differential diagnosis
- Consider systemic or medical conditions that may impact diagnosis and management

Decision Tree Model

A pathoanatomical/medical diagnosis of midportion Achilles tendinopathy can provide valuable information in describing tissue pathology and may assist in planning treatment and predicting prognosis. The proposed model for examination, diagnosis, and treatment planning for patients with Achilles pain, stiffness, and muscle power deficits associated with midportion Achilles tendinopathy uses the following components: (1) medical screening, (2) classification of the condition through evaluation of clinical findings suggestive of musculoskeletal impairments of body functioning (ICF) and associated tissue pathology/disease (ICD), (3) determination of irritability stage, (4) determination of evaluative outcome measures, and (5) intervention strategies for patients in acute and nonacute stages. This model is depicted in the FIGURE.

Component 1

Medical screening incorporates the findings from the history and physical examination to determine whether the patient’s symptoms originate from a condition that requires referral to another health care provider. Acute Achilles tendon rupture and systemic inflammatory disease would be examples of conditions that would require referral to another health care provider.

Component 2

Evaluation of physical examination findings, as outlined in the FIGURE, should be consistent with the diagnosis of midportion Achilles tendinopathy. The diagnosis and management of the patient’s condition should be appropriately modified if the evaluation of clinical findings related to the musculoskeletal impairments of body functioning (ICF) and associated tissue pathology/disease (ICD) suggest other foot or ankle conditions in a differential diagnosis list, symptoms from the lumbopelvic region, or systemic or medical disease.

Component 3

Irritability is a term used by rehabilitation practitioners to reflect the tissue’s ability to handle physical stress, and is presumably related to physical status and the extent of injury and inflammatory activity that is present. Diagnosis of tissue irritability as acute or nonacute, according to the signs, symptoms, and duration of the condition, is important in guiding the clinical decisions regarding the intervention strategies as outlined in component 5.
**Component 5: Intervention Strategies**

**Acute: Diagnostic Indicators**
- Redness, warmth, and swelling
- ≤3 mo in duration
- High levels of pain limiting low-level activity (ie, walking)

Findings/interventions
- Pain and inflammation
  - Iontophoresis
  - Other modalities
- Loss of motion
  - Stretching
  - Joint and/or soft tissue mobilization
- Painful motion
  - Rigid taping
  - Other range-of-motion protective treatment (ie, bracing)

Include patient education and counseling.

**Nonacute: Diagnostic Indicators**
- No redness, warmth, and swelling
- >3 mo in duration
- Pain after the onset of or after completing higher-level activity (ie, jumping and running)

Findings/interventions
- Tendon pain with palpation, with or without presence of nodules
  - Mechanical loading exercises: eccentric, concentric/eccentric, or heavy load and slow speed
- Loss of motion
  - Stretching
  - Joint and/or soft tissue mobilization
- Painful motion
  - Rigid taping
  - Other range-of-motion protective treatment (ie, bracing)
- Abnormal lower-quarter musculoskeletal and biomechanical findings
  - Neuromuscular exercises targeting lower extremity impairments that may lead to abnormal kinetics and/or kinematics

Include patient education and counseling.

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**FIGURE (CONTINUED).** Model of diagnosis, examination, and treatment of Achilles pain, stiffness, and muscle power deficits. Superscript letters indicate that the guidelines are based on (A) strong evidence, (B) moderate evidence, (C) weak evidence, (D) conflicting evidence, (E) theoretical/foundational evidence, or (F) expert opinion.
Component 4
Outcome measures include an assessment of the patient’s functional level and associated physical impairments as outlined in the Figure. Standardized tools, such as the VISA-A, FAAM, and LEFS, can be used for measuring a specific domain, whether it is a body structure or function, activity limitation, or participation restriction. Outcome measures are important in direct management of individual patient care, and they provide the opportunity to collectively compare care and determine effectiveness through the repeated application of standardized measurement.

Component 5
Intervention strategies outline criteria for treatment selection based on diagnostic indicators and clinical examination findings and allow for treatment planning based on re-evaluation. Interventions are grouped based on the following categories: therapeutic exercise (exercise, stretching, neuromuscular education), manual therapy, education (patient education, patient counseling), home use of medical supplies (bracing), and clinical use of medical devices (iontophoresis). A higher level of evidence indicates greater scientific support for the recommendation, not necessarily the intervention itself. For example, there is a relatively high-level of evidence for the recommendation not to use night splints for patients with midportion Achilles tendinopathy. Interventions outside of the scope of physical therapy, including corticosteroid injection, extracorporeal shockwave therapy (ESWT), and platelet-rich plasma (PRP) injections, are included as education for patients who are seeking additional treatment options. Of note, the majority of studies include patients with chronic midportion Achilles tendinopathy. Therefore, treatment of a patient with acute Achilles tendinopathy may depend more on clinical judgment and expert opinion.
